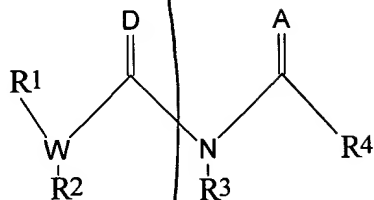


WHAT IS CLAIMED IS:

1. A compound of the formula



wherein

A is O, S or N-R, wherein R is lower alkyl (C₁-C₈);

D is O, S or N-R⁷;

W is N, CH or C-R⁸;

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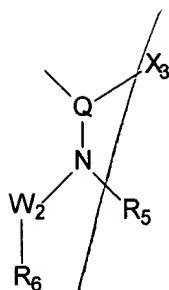
R¹ and R³ are independently H, straight or branched, cyclic or acyclic, saturated or unsaturated C₁-C₁₄ alkyl radicals, optionally substituted by hydroxy, lower alkoxy, alkylthio, aryloxy or arylthio groups, wherein said aryl-bearing groups are optionally substituted by halogen, lower alkoxy, alkylthio, lower alkyl, trifluoromethoxy, trifluoroethoxy or trifluoromethyl groups, and optionally said alkyl groups are substituted

15

by cyclic structures selected from the group consisting of rings having a ring size of from 3 to 10 atoms, or said alkyl groups are substituted by aromatic or heteroaromatic moieties, said aryl or heteroaryl groups optionally containing substituents on the aryl ring selected from the group consisting of lower alkyl, alkoxy, amino, lower alkylamino, lower acylamino, halogens, and trifluoromethyl or trifluoromethoxy groups;

20

R² is



5

wherein

W₂ is C=O, SO₂, C(O)NH; SO; or is absent;

Q is

(a) a substituted or unsubstituted (-CH₂-)_z, wherein z = 1 to 12, and when -CH₂- is substituted, the substituting groups are lower alkyl, aryl or heteroaryl; and when z > 1, at least one -CH₂- group is optionally replaced by a heteroatom selected from the group consisting of O, S, or a substituted or unsubstituted N, wherein the substituting moiety is selected from the group consisting of lower alkyl, aryl, heteroarylalkyl and hydrogen;

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(b) a saturated carbocyclic or heterocyclic ring of the formula (-CH₂-)_x

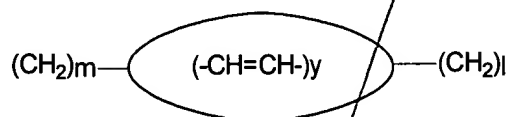


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wherein l and m are 0-5, and wherein x = 3-12, preferably 3-8, and optionally, one or more -CH₂- groups are substituted by a radical selected from the group consisting of saturated or unsaturated lower alkyl, cycloalkyl, aryl and heteroaryl; and optionally at least one of the -CH₂- groups is replaced by a heteroatom selected from the group consisting of O, S, Se and substituted or unsubstituted N, and when N is substituted, the substituting group is selected from the group consisting of lower alkyl, aryl, heteroaryl and hydrogen;

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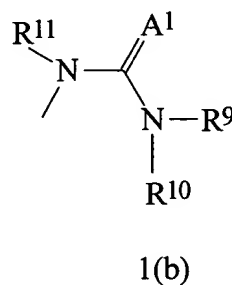
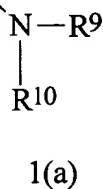
(c) a carbocyclic or heterocyclic aromatic ring of the formula $(-\text{CH}=\text{CH}-)_y$:



wherein l and m are 0-5, and wherein $y \geq 2$ and optionally at least one of the $-\text{CH}-$ groups is substituted by X^1 , X^2 or both X^1 and X^2 wherein X is any ring substituent, for example saturated or unsaturated, linear or branched alkyl groups, lower alkoxy groups or halogens, and optionally, at least one of the $-\text{CH}-$ groups is replaced by N , or alternatively, one of the $-\text{CH}=\text{CH}-$ groups is replaced by a heteroatom selected from the group consisting of O , S , Se and $\text{N}-\text{R}^{11}$; also optionally, at least one of the $-\text{CH}=\text{CH}-$ groups is a junction to which another ring structure, either saturated or unsaturated can be fused, thus forming condensed aromatic or heteroaromatic systems selected, for example, from the group consisting of naphthalene, indole, benzofuran, quinoline, quinazoline and benzodioxane classes;

X^3 is a substituent on Q which can be H , lower alkyl, aryl, lower alkoxy, hydroxy, trifluoromethyl, and similar common ring substituents.

R^4 is selected from the group consisting of the following general formulas:



wherein A^1 is O , S , NH or N -lower alkyl or aryl;

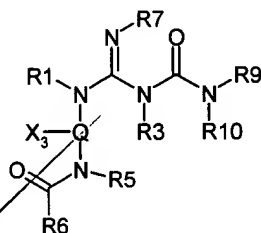
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R⁵ to R⁹, R¹¹ and R¹² are independently selected from the group
consisting of H, linear or branched, saturated or unsaturated, cyclic or acyclic, substituted
or unsubstituted C₁ to C₁₄ alkyl radicals, or aryl or heteroaryl radicals, and when any one
of R⁵ to R⁹, R¹¹ or R¹² is a substituted aryl or heteroaryl radical, the substituting group is
5 selected from members of the group consisting of halogen, lower alkoxy, alkylthio, lower
alkyl, trifluoromethoxy and trifluoromethyl, and when any one of R⁵ to R⁹, R¹¹ or R¹² is a
substituted alkyl radical, the substituting moiety is selected from the group consisting of
non-aromatic cyclic systems having from 3 to 14 ring atoms, and aromatic and
heteroaromatic systems and heterocyclic rings having from 4-12 ring members, and said
10 aromatic and heteroaromatic rings optionally are substituted by radicals selected from the
group consisting of lower alkyl, alkoxy, amino, lower alkylamino, lower acylamido,
halogens, perfluoroalkyl, and perfluoro-lower alkoxy; or

R⁶ is H, C₁ to C₁₄ alkyl, straight or branched, cyclic or acyclic, saturated or
unsaturated; aryl; heteroaryl; aryl-lower alkyl; heteroaryl-lower alkyl; condensed aryl-
15 lower alkyl; condensed heteroaryl-lower alkyl; diaryl-lower alkyl; bis-heteroaryl-lower
alkyl; or heteroaryl-lower alkyl-aryl; or partially or fully saturated derivatives thereof; or
R⁶ can be R^{6'} which is R⁶-NH or R⁶-N-lower alkyl;

R¹⁰ is hydrogen, C₁-C₁₂ alkyl, straight or branched, saturated or unsaturated, cyclic or
20 acyclic groups, optionally containing double or triple bonds; aryl, optionally substituted
with groups such as halogen, lower alkyl, alkoxy, aminoalkyl, di-(lower alkyl)-amino-
lower alkyl, hydroxy; arylalkyl; aryloxyalkyl; 2-tetrahydrofurfuryl;

3-tetrahydrofurfuryl; terminal hydroxyalkyl with C₂-C₁₀ hydrocarbon chains and amidoalkyl such as 2-acetamidoethyl; or R⁹ and R¹⁰ can optionally form a 3 to 10-membered ring; and the compounds comprise any optically active isomers thereof in the form of separated, pure or partially purified optical isomers or racemic mixtures thereof; and pharmaceutically acceptable salts thereof.

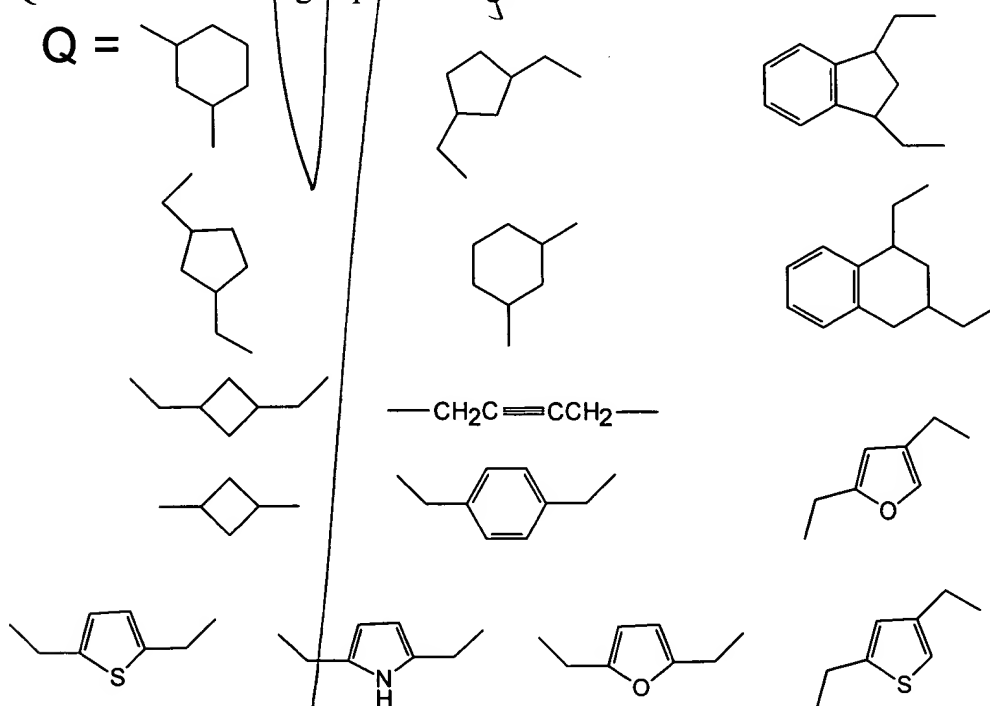
2. A compound having the structure of



wherein R¹, R³, R⁵, R⁷, R⁹, R¹⁰ and X³ are as defined in Claim 1 and

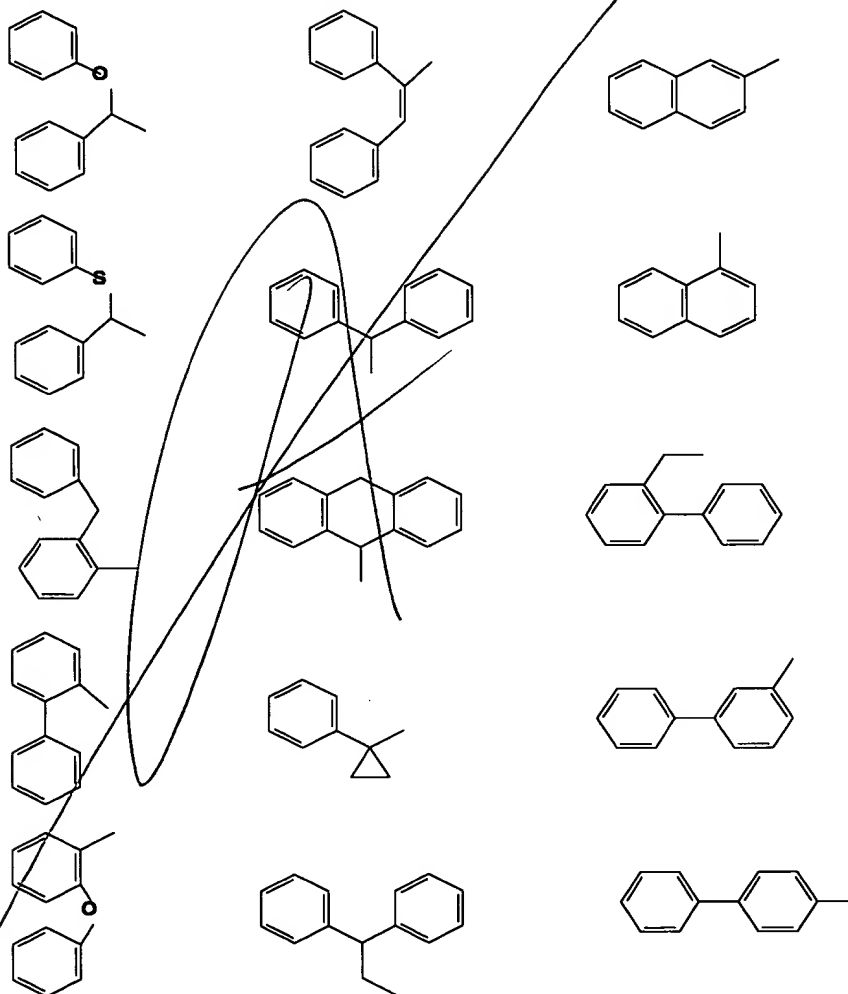
Q is selected from the group consisting of

Q =



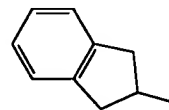
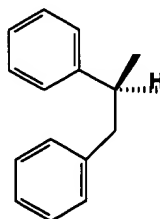
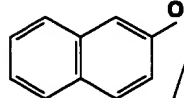
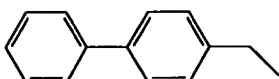
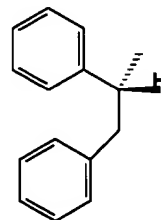
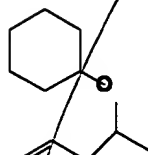
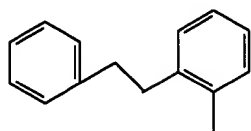
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- $$R^6 =$$

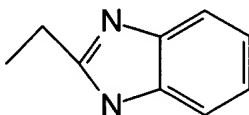
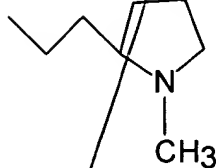
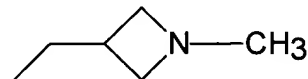
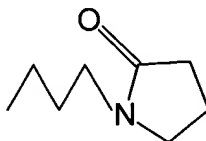
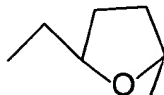
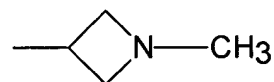
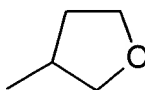
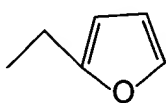


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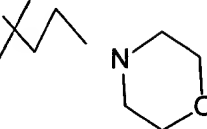
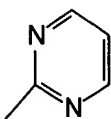
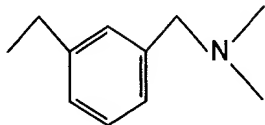


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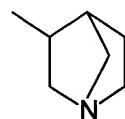
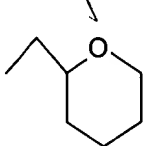
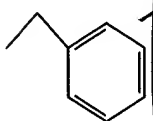
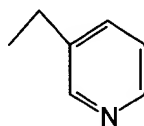
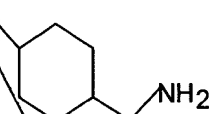
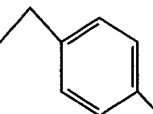
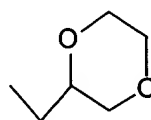
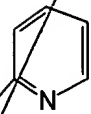
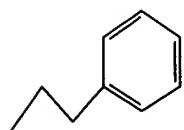


6. A compound according to Claim 2 wherein R^9 is selected from the group consisting of

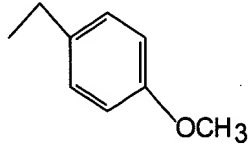
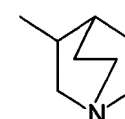
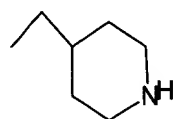
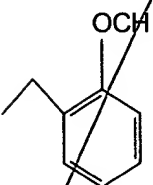
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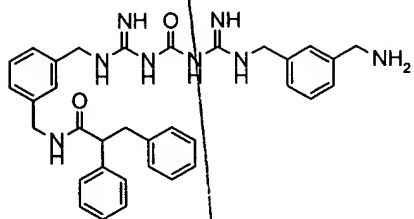


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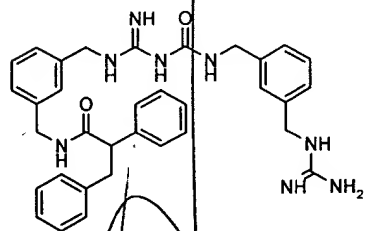
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7. A compound having the structure



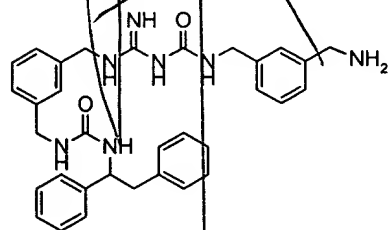
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8. A compound having the structure



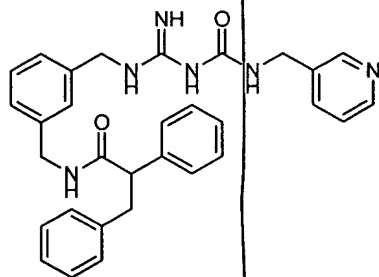
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9. A compound having the structure



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10. A compound having the structure



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11. A pharmaceutical composition comprising any one of the compounds according to Claims 1-10 in a pharmaceutically acceptable carrier.

12. A method of treating a mammal in need thereof for a disorder of neuropeptide Y activity comprising administering to said mammal an effective amount of any one of the compounds of Claims 1-10.

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